DOCUMENT RESUME

ED 142 889 CG 011 620

AUTHOR Henderson, James T.
TITLE Hope and Self-Destruction: The Ratio of External Threat to Feelings of Personal Competence on the Underlying Continuum of Self-Destructive Behavior.
SPONS AGENCY Public Health Service (DHEW), Arlington, Va.
PUB DATE Apr 76
GRANT MH-12557
NOTE 22p.; Paper presented at the Annual Meeting of the Southwestern Psychological Association (Albuquerque, New Mexico, April 29-May 1, 1976)

EDRS PRICE MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS *Behavior Patterns; *Delay of Gratification; *Emotional Adjustment; Locus of Control; *Personality Problems; *Psychopathology; Research Projects; Self Control; Self Esteem; *Suicide

ABSTRACT

This study assumes that all suicidal and self-destructive behavior can be placed on a continuum from hopeful (H) to hopeless (S). The author attempts to show that there is an underlying continuum of hope corresponding to what we know about the statistics of suicidal behavior. He employs two operational hypotheses as tests of his ideas: (1) a group of college students who admit to significant amounts of suicidal thought will also be significantly higher in degree of hopelessness than will a comparison group of college students who do not claim to have much self-destructive thought; and (2) among a sample of formerly hospitalized patients, a higher degree of hopelessness will be found among serious attempters than among those who have only made suicidal gestures or threats. (VG)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

ED142889

HOPE AND SELF-DESTRUCTION: THE RATIO OF EXTERNAL THREAT TO FEELINGS OF PERSONAL COMPETENCE ON THE UNDERLYING CONTINUUM OF SELF-DESTRUCTIVE BEHAVIOR

James T. Henderson, Ph.D.
Cottey College
Nevada, Missouri

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

James Henderson

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

CG 011620

A paper presented to the annual meeting of the Southwestern Psychological Association
April, 1976

HOPE AND SELF-DESTRUCTION: THE RATIO OF EXTERNAL THREAT TO FEELINGS OF PERSONAL COMPETENCE AS THE UNDERLYING CONTINUUM OF SELF-DESTRUCTIVE BEHAVIOR[1]

Folk wisdom has long been aware of the central importance of hope: "Hope springs eternal in the human breast" and "Where there is life, there is hope" among other expressions.

For many years, those who have worked with suicidal behavior have understood--at least on a clinical or intuitive level--the importance of hope, or rather of the lack of hope, in the etiology of the completed or attempted suicide (e.g., Kobler & Stotland, 1964).

The Domain of Hope

Behavioral scientists have generally been averse to the use of what seems to be such a subjective term as hope. Yet, use of the term "expectation"--which would seem to be nearly synonomous with hope--is not at all an unknown word in psychology (e.g., Tolman, 1948; Rotter, 1966, Atkinson, 1964).

Lewin (1951) described hope and placed it in his formal psychological system. For Lewin, hope was the future time-perspective, the future outlook as it exists in the present.

Frankl (1963) takes quite seriously the idea of hope and related concepts. When speaking of his experience in a concentration

---

[1]This paper is based on a dissertation submitted to the faculty of the Graduate School of the University of Maryland in partial fulfillment of the requirements of the degree of Doctor of Philosophy. A portion of the financial support for this research came from P.H.S. Grant No. MH 12557.

camp he says that the thought of suicide was entertained, at times, by nearly everybody. "It was," he states, "born of the hopelessness of the situation (p. 27)."

Animal study relating to hope. Richter (1959) has studied the phenomenon of unexplained sudden death in the rat. He has found that rats that are restrained or that have certain of their sensory organs removed will unexpectedly die or seem to "give up" in circumstances where control animals show every sign of survival. No sufficient cause of death can be found in autopsy for many of these dead animals. Richter feels that the situation of these animals who "give up" is one of hopelessness--the animal is no longer able to cope in any way with his situation and he responds, in many cases, by dying.

Hope and psychotherapy. In the field of psychotherapy, Frank (1963) has written on the role of hope. By hope he means expectations about the future, and he suggests that such expectations affect all aspects of human functioning. Frank demonstrated a relationship of expectations to improvement after the initial clinic evaluation interview, and there was also a positive relationship between expected and reported relief of symptoms and the same relationship between the outcome of therapy and the expectation of being helped.

The development of hope. Erikson (1963) has written about hope in the context of a modified psychoanalytic theory. For Erikson, hope is closely related to the initial stage of development in which the infant, well-handled, nurtured, and loved, develops trust, security, and a basic optimism.

One of the most recent and exhaustive studies of the concept

of hope is that of Stotland (1969). He conceives of hope (i.e., expectation of the attainment of goals) as being an important part of the understanding of what it is that motivates an organism to behave.

Farber's Theory of Hope

One recent theory of self-destructive behavior is that of Farber (1968). It understands self-destructive (including suicidal) behavior as an inverse function of hope. This theory of Farber's is used as the theoretical basis for the study reported in this paper.

Farber makes clear that hope (or in this case, the opposite of hope) is comprised of two components. One component is asserted to be a low sense of competence (C) while the other component is described as threat to acceptable life conditions (T). C, the sense of competence, is the internal, psychological component of hope, while T, environmental threat, is the external/reality-oriented component of hope.

Farber defines hope as the "confident expectation that a desired outcome will occur." (Farber, 1968, p. 12) More formally, the definition of hope (H) is put in the following formula:

$$H = f\left(\frac{C}{T}\right) \qquad (1)$$

As formula (1) suggests, the operation of hope depends upon the individual's cognitive and emotional processes that allow him to feel that he is competent to cope with the demands of living, and upon the manner in which the forces of external reality have impinged upon the individual, i.e., the degree of threat.

As indicated above, Farber sees the probability of suicidal behavior as being the inverse of the degree of hope which is operating

in the individual at any given time. He states, "Suicides in the main are committed by psychologically damaged personalities confronted by a deprivational situation." (Farber, 1968, p. 11) Therefore, the probability of self-destructive behavior (S) can be conceptualized as follows:

$$S = f\left(\frac{1}{H}\right) \qquad (2)$$

$$= f\left(\frac{T}{C}\right) \qquad (3)$$

Thus, the larger the degree of hope, the less likely will be self-destructive behavior. This can be translated into the statement that the smaller the threat and the larger the sense of competence, the less likely will be self-destructive behavior. The basic purpose of the research reported in this paper is to test equation (3).

Operational Definition of Hope

Since Farber has not suggested precise operational definitons for his concepts of competence and threat, it is necessary for purposes of this study to define the operations needed to measure these concepts.

Competence. It will be recalled that Farber's conceptualization of hope consists of two components, one of which is called competence. R.W. White (1963) has written about the concept of competence as a basic pervasive feeling in the individual that he has within himself the resources to cope with the demands of living. In contrast to a drive theory of motivation, White posits that competence is the organizing principle of motivation. More specifically, White defines competence as "an organism's capacity to interact effectively with his environment." (White, 1963, p. 297)

Competence can also be translated into terms of reinforcement

and expectancy as, e.g., in Rotter's social learning theory (Rotter, 1954, 1966.) In social learning theory a reinforcement acts to strengthen an expectancy that a particular behavior or event will be followed by that reinforcement in the future. Thus, it would seem to follow that the sense of competency is built up when the individual sees the positive effect of his own actions upon his environment--which would seem to be reinforcement in itself--and which would undoubtedly increase the expectation that one can modify his world in other times and other situations.

Rotter distinguishes two kinds of individuals in regard to their attitude regarding what it is upon which the individual sees his reinforcement as contingent. He refers to this dimension as the internal-external (I-E) locus of control of reinforcement. According to Rotter, externally oriented individuals would have less expectancy that anything which they might do would lead to reward. Thus the implication would seem to follow that the externally oriented person would tend to feel relatively impotent, and particularly in the face of a crisis, rather incompetent.

Another factor to be considered in the definition of competence is the self-concept, i.e., the self that views and evaluates itself (Wylie, 1961). A positive view of the self can be regarded as a <u>sine qua non</u> of a sense of competence.

The third element in the development of a working definition of competence--beyond the dimensions of internal-external locus of control and self-concept--is what could be called the value dimension, that is to say, the sense that one has of the significance of one's own life.

The sense of significance, of meaning, in one's life is postulated as an essential part of the definition of competence.

What is suggested, then, is that the sense of competence, the personality dimension of hope, consists of an interrelationship among at least three factors--internal locus of control; a favorable self-concept; and a high sense of the meaning of one's own life. In negative terms, the incompetent individual is one who is not only an externalizer, but who also has both a negative self-concept and a low sense of purpose in life.

Threat. The second component of hope is referred to as the degree of threat. In White's (1963) definition of competence, threat can be equated with the "demands of living." Note that it would not be proper to speak about the perceived demands of life in terms of dealing with equation (3). As Farber says:

> "T, the threat to acceptable life conditions, is better conceptualized as an objective variable rather than a phenomenological one. Although individuals doubtless differ as to what they perceive to be a threat, this perception derives partly from the sense of competence. To use the perceived threat as the T variable would cause overlapping of T and C, since what one sees as threatening is partly determined by C. The solution is to define T in terms of a social-psychological scale of threats for a given culture, thus keeping C and T independent of each other." (Farber, 1968, p. 15)

Basic Assumption

The assumption of a continuum of self-destructive behavior is heavily challenged by many of those who have written about, and/or done research in, suicidal behavior (e.g., Maris, 1969; Stengel, 1964). In regard to variables such as sex and age, e.g., there are definite differences between the population of those who attempt suicide and those who complete suicide. The modal suicide completer is male, over 40

years of age, and uses a gun with which to kill himself. The modal suicide attempter is female, between 20 and 30 years of age, and takes an overdose of barbiturates (Shneidman and Farberow, 1961). Stengel (1964) perhaps makes the most persuasive case that completers and attempters are two different populations. He points out that less than 10 percent of persons who attempt suicide later kill themselves, while many who complete suicide do so on their first attempt.

However, the admitted differences between those who complete and those who attempt suicide can be explained in ways other than denying that the underlying dynamic in self-destructive behavior is a continuum. The fact that men typically use guns while women typically use pills can very well be seen as a cultural style. Because men use the more violent and lethal modalities of death, it is no surprise that they die more frequently.

This study assumes that all suicidal and self-destructive behavior can be placed on a continuum from hopeful (H) to hopeless (S). If this is true, serious suicide attempters would be expected to have a higher degree of S than persons who have made only a suicidal gesture or who have only talked or thought about the desirability of suicide for themselves. Those who have thought more or less seriously about the possibility of their own suicide would be expected to have a higher degree of S than would a comparision group of less suicidal or non-suicidal individuals. If it can be shown that there is an underlying continuum of hope corresponding to what we know about the statistics of suicidal behavior, a very strong case will have been made that should contribute to the understanding of the underlying dynamics of self-

destructive behavior.

Operational Hypotheses

The following two operational hypotheses were used as tests of the ideas described above.

I. A group of college students who admit to significant amounts of suicidal thought will also be significantly higher in degree of S than will be a comparison group of college students who do not claim to have much self-destructive thought.

II. Among a sample of patients who have been hospitalized following a suicide attempt (or who have a history of suicidal threat or attempt while hospitalized), a higher degree of S will be found among the serious attempters than among a group who have only made suicidal gestures or threats.

METHOD

Subjects

The design of this research called for a test of the hypotheses of the study on two different samples, i.e., a smaple of college students and a sample of patients with a history of suicide attempt or threat.

The college-age sample for the study was 92 male and 91 female students of the University of Maryland. These 183 college students were divided into a suicidal ideation group (SI) and a comparison group (CO) on the basis of their responses to the following five items:

1. Sometimes death seems preferable to life.
2. I cannot recall a time when suicide has seemed tempting to me.
3. For one reason or another, I have seriously thought of harming myself.
4. I have often wished that I did not have to live through another day.
5. With regard to suicide, I have thought of it seriously as a way out. (This is item 16 of the Purpose-In-Life Test.)

All of the items in the suicidal ideation scale were responded to on a seven-point scale, with one representing low self-destructive ideation and seven representing high self-destructive ideation.

The mean age of the SI group was 19.44; the mean age of the CO group was 19.41. The difference was not significant. Thirty-eight percent of the SI group was comprised of males, whereas males comprised 59 percent of the CO group.

The other sample for this study was hospitalized patients who had a history (as noted in their records) of suicide attempt, or whose history recorded suicidal threats. (In two cases subjects had recently been released from hospitalization and were being treated on an out-patient basis.) Fifty-six patients completed the interview and testing and were used as subjects. Patients were secured from five sources: the Suicide Studies Unit of St. Elizabeths Hospital, Washington, D.C.; Gulfport, Miss., V.A. Hospital; Biloxi, Miss., V.A. Hospital; New Orleans, La., V.A. Hospital; and the Perry Point, MD., V.A. Hospital.

Two groups of patients were formed on the basis of ratings using the variables (with the exception of sex) outlines by Tuckman & Youngman (1968) in an effort to measure seriousness of attempt. One group was called a suicidal gesture/threat (SG) group, while the other was designated as a serious suicidal attempt (SS) group. The modal age of SG was in the 26-35-year old category, while the modal age of group SS was in the 46-55-year-old category. Twenty-eight individuals were assigned to each group. There were 18 males in group SG, and 19 males in group SS.

Instruments

Three instruments were used in both samples to measure the elements of competence described above. The Rotter Internal-External Locus of Control of Reinforcement Scale (I-E), the Tennessee Self-Concept Scale (TSCS), and the Purpose-In-Life Test (PIL).

Rotter Scale (I-E). At least one study (Williams & Nichols, 1969) reported significant relationships between measures of suicide-proneness (MMPI suicide scale and the Potential Suicide Personality Inventory) and higher scores on the I-E (indicating external locus of control). For purposes of this study, the usual I-E scoring system was reversed so that a high score would indicate internality since the hypotheses of the study are stated in terms of a positive relationship between internality and high scores on the other instruments.

Tennessee Self-Concept Scale (TSCS). The instrument used in this study to measure self-esteem was the TSCS. This scale was developed by Fitts (1965) to meet the need for a self-concept measure that is simple for the subject, widely applicable, and multidimensional in its description of self-concept.

Purpose-In-Life Test (PIL). Crumbaugh and Maholick (1964) developed the PIL as an experimental instrument to determine if it were possible to isolate psychometrically Frankl's will-to-meaning construct from other personality dynamics. The PIL is a Likert-type attitude scale designed to evoke responses believed related to the degree to which the individual experiences "purpose in life." A previous study by this writer (Henderson, 1970) found the PIL to have significant negative correlations with measures of anxiety, hostility, depression,

and neuroticism, among others, and significant positive correlations with a measure of self-acceptance, among others.

Measurement of Threat. This study attempted to measure the other component of hope, T, by asking subjects to report significant events that had happened recently in their lives, and then to bring some degree of objectiveness to these perceptions of life events by having judges rate the degree of positive or negative impact on a hypothetical "normal" individual. The instrument that was developed attempted to measure the degree of threat to acceptable life conditions that the subject was facing in his own life. Beyond demographic information, these forms contained eight items asking the subject to state briefly what had happened in his life in the past year or so which he regarded as being significant or which had made some kind of change in his life. Five specific areas were suggested, namely: family, friendship, feelings about oneself, physical health, academic or employment activities. Opportunity was also given for open-ended, unstructured responses, and for the subject to report on the best and the worst events that had happened to him in the past year or so. Scores for these instruments were obtained by the use of competent judges' ratings of the responses. There was a high degree of inter-judge reliability (mean intercorrelation = .87). The mean of the judges' ratings were used as the subjects' threat scores.

Analysis of the Data

The quantitative datum of major importance to the basic hypotheses of this study is the inverse hope or S score. In terms of the operations carried out in this study this score is derived by dividing

the T score by the combination of scores measuring competence, i.e., the I-E, the TSCS, and the PIL.

In order to find the best possible weighting for the variables that combined to form the competence score, discriminant analyses were performed on the combined scores from the student sample and from the patient sample. Weights that maximally separated the groups were given to each test variable and a multiple discriminant value was calculated for each subject which then represented the competence, or C score. Thus, the T rating divided by the C score gave the S value for each subject.

RESULTS

In order to deal with the results of this study in as clear and concise a manner as possible, they will be discussed as they apply to the operational hypotheses described previously.

Hypothesis I

This hypothesis predicted higher S scores in the student suicidal ideation group than in the student comparison group.

Test data. Table 1 records means and standard deviations for the patient and student samples for the three test variables. In the student groups all differences between means are significant beyond the .01 level. In the patient groups the difference between PIL means is significant beyond the .01 level, the difference between TSCS means is significant beyond the .05 level, the difference between I-E means is not significant.

Competence score. The two student groups were significantly differentiated from each other in terms of group means on the composite

C scores. The difference between composite score means for the SI and CO groups was tested with an F test that yielded a value of 15.90 which is significant beyond the .001 level.

Threat ratings and inverse hope scores. Means and standard deviations of threat ratings (T) and inverse hope scores (S) are found in Table 2. The means of the two student groups on these two variables were significantly different (by t test) beyond the .05 level. Note that in the case of T, the higher the rating the greater the degree of threat. In the case of S scores, high scores indicate a lack of hope as it is defined in this study.

Although T ratings are based on the same scale and can be compared across the student and patient samples, S scores are based on different weightings of the variables for each sample and thus have no comparability across the samples. The S score data for the student sample show that the group effect is highly significant ($F = 60.42$, p less than .01) indicating a substantial difference between the two student groups in accordance with Hypothesis I.

Hypothesis II

This hypothesis predicted higher S scores among the serious attempters than among the gesture/threat group.

As previously indicated, Table 1 records means and standard deviations for the patient sample for the three major test variables. In the patient sample the F test on the means of the composite C score yielded a value of 3.35 which is significant beyond the .05 level, indicating that the composite scores on the test variables were sufficient to differentiate between patient groups SS and SG. Means and

standard deviations of T and S scores are found in Table 2. The difference between the S score means was significant at the .05 level for patient groups SS and SG. However, the difference between the mean T ratings was not significant. The analysis of variance on the patients' S scores fails to reach significance at the .05 level. However, as can be seen in Table 2, a simple t test of the difference between the means is significant. It can be said that the results are in substantial accordance with Hypothesis II.

DISCUSSION

Hypothesis I stated that a student suicidal ideation group would have a significantly higher S score than would a comparison group of students. Both the t test and the analysis of variance showed the difference to be highly significant in the expected direction.

Although the hypothesis of significant difference between the SI and the CO groups in terms of the S score was readily confirmed, it is also to be noted that these two groups differed on almost every measured variable of the study with the exception of age. Of 16 test variables compiled from the instruments used in this study, 13 were significantly different between the two student groups.

Hypothesis II dealt with the patient sample. The results of the patient S score differences are not as clear-cut as those of the student sample. although the group difference is in the expected direction. These results may be due to several factors. First is the relatively small size of the patient groups. A second factor is the relative insensitivity of the Tuckman-Youngman scale for distinguishing between the serious suicide attempt and suicide gesture/threat, even

though it is probably as good an instrument of its type as is available at the present time. The remarkable fact is that, given the insufficiencies of the scale, the results gave as much support to the hypothesis of group differences as they did.

Differences between the two patient groups were demonstrated even more unequivocally by the test variables than by the S scores. Of 16 test variables, nine of them were significantly different beyond the .05 level. It is interesting that the most significant difference (in terms of t value) between the two groups was on Column A of the TSCS which measures the subject's perceptions of his physical self. The implication would seem to be that the person who makes a serious suicide attempt has an extremely negative image of his own body and many of its functions such as skills and sexuality.

Beyond the testing of the operational hypotheses described above, several interesting observations can be made concerning results obtained in this study. One has to do with the effectiveness of the PIL in measuring a quality which seems to be highly related to self-destructive behavior. The PIL was the only one of the three major test instruments that differentiated all four groups used in the study beyond the .01 level. The progression of mean PIL scores in these four groups from 64.07 up to 107.88 would seem to provide support for the idea that there is a psychological continuum underlying suicidal behavior corresponding to the "seriousness" of the behavior. The PIL had the highest correlations of any variable with the suicidal ideation scale in both the student and patient smaples.

A second observation concerns the degree of suicidal ideation

and generally hopeless feelings which are revealed in the college sample. Over 40 percent of the college sample fell into the suicidal ideation group. This corresponds closely with similar statistics presented in various papers at the 1973 sessions of the American Association of Suicidology.

A third observation has to do with the mean threat (T) score of the various groups which, as in the case of all of the other test variables except the I-E, makes a perfect progression from the group considered to be least suicidal (CO) to the group considered to be the most suicidal (SS). This lends support to the case that threat to acceptable life conditions is directly related to degree of self-destructive thought or behavior, and would tend to cast doubt on those theories that rely on psychodynamic explanations alone.

CONCLUSION

The poet and the peasant, each in his own way, sing of hope and live by hope. The expectation of something desired, a simple pleasure, a life-long dream, a new and better life, keeps men going even when events conspire to fill the present with boredom or anxiety or terror.

Psychological scholars have long recognized that the present is roughly handled by the dead hand of the past. Often these same thinkers have not paused to ponder that the present is as much, perhaps more, in the grip of that private vision of the future which each man has. The vision may bring hope or despair--and it often casts the deciding vote in the perplexing struggle between life and death that many persons wage from time to time in the ultimate recesses of their humanity.

TABLE 1

Comparison of Mean Scores and Standard Deviations
On Three Major Tests For All Groups

	Patient Group SS N = 28	Patient Group SG N = 28	Student Group SI N = 74	Student Group CO N = 109
PIL	$\bar{X}$ = 64.07	80.61	92.12	107.08
	SD = 18.22	25.59	16.18	12.92
Reversed I-E	$\bar{X}$ = 12.96	12.21	9.58	11.24
	SD = 4.19	4.03	3.49	4.26
TSCS	$\bar{X}$ = 275.14	302.82	316.38	333.32
	SD = 42.98	51.44	26.39	30.36

Notes. - Group SS is the serious suicidal group; SG is the gesture/threat group; SI is the suicidal ideation group; and CO is the student comparison group.

TABLE 2

Means and Standard Deviations of Threat Scores and S Scores for Patients and Students by Groups

	Patient Group SS (Serious Suicidal)	Patient Group SG (Gesture/Threat)	Student Group SI (Suicidal Ideation)	Student Group CO (Comparison)
Threat Ratings (T)				
$\bar{X}$	5.135	4.988	3.930	3.696
SD	.321	.366	.221	.137
N	28	28	74	109
S Scores				
$\bar{X}$	15.43	11.88	11.95	9.37
SD	7.17	8.46	3.20	1.96
N	27 (a)	28	74	109

	$\bar{X}_{SS} - \bar{X}_{SG}$	$\bar{X}_{SI} - \bar{X}_{CO}$
Threat Ratings(T)	.147	.234**
S Scores	3.55*	2.58**

Note. - There is no comparability between S scores of patient sample and student sample.

[a]One subject was eliminated in this group

**$p < .01$

*$p < .05$

LIST OF WORKS CITED

Atkinson, J.W., An introduction to motivation, New York: Van Nostrand, 1964.

Crumbaugh, J.C., and Maholick, L. T., An experimental study in existentialism: The psychometric approach to Frankl's concept of noogenic neurosis. Journal of Clinical Psychology, 1964, 20, 200-207.

Erickson, E.H., Childhood and Society, New York: W.W. Morton, 1963.

Farber, Maurice, Theory of suicide, New York: Funk and Wagnalls, 1968.

Fitts, W.H., Manual for the Tennessee self-concept scale, Nashville: Counselor Recordings and Tests, 1965.

Frank, J., The role of hope in psychotherapy. Int. Jr. of Psychiatry, 1963, 12, 384-412.

Frankl, V.E., Man's search for meaning, New York: Washington Square Press, 1963.

Henderson, J.T., The will-to-meaning of V. Frankl as a meaningful factor of personality. Unpublished Master's thesis, Univ. of Maryland, 1970.

Kobler, A.L., and Stotland, E., The end of hope: A social-clinical study of suicide, New York: Free Press, 1964.

Lewin, K., Field theory in social science, New York: Harper, 1951.

Mavis, R.W., Social forces in urban suicide, Homewood, Ill.: Dorsey Press, 1969.

Richter, C.P., The phenomenon of unexplained sudden death in animals and men. In H. Feifel (Ed.), The meaning of death, New York: McGraw-Hill, 1959.

Rotter, J.B., Social learning and clinical psychology, Englewood Cliffs: Prentice-Hall, 1954.

Rotter, J.B., Generalized expectancies for internal vs. external control of reinforcement. Psychological Monographs. 1966, 80, No. 1.

Shneidman, E.S., and Farberow, N.L., Statistical comparisons between attempted and committed suicides. In N.L. Farberow and E.S. Schneidman (Eds.), The cry for help, New York: McGraw-Hill, 1961.

Stengel, E., Suicide and attempted suicide, Baltimore: Penguin Books, 1964.

Stotland, E., The psychology of hope, San Francisco: Jossey-Boss, 1969.

Tolman, E.C., Cognitive maps in rats and men. Psychological Review. 1948, 55, 189-208.

Tuckman, J. and Youngman, W.F., A scale for assessing suicide risk of attempted suicides. Jr. of Clinical Psychology. 1968, 24, 17-19.

White, R.W., Ego and reality in Psychoanalytic theory, New York: Int. Univ. Press, 1963.

Williams, C.B., and Nickels, J.B., Internal-external control dimension as related to accident and suicide proneness. Jr. of Consult. and Clinical Psychology. 1969, 33, 485-494.

Wylie, Ruth C., The self-concept, Lincoln, Neb.: Univ. of Nebraska Press, 1961.